



DEPARTMENT OF THE NAVY
NAVAL AIR SYSTEMS COMMAND
NAVAL AIR SYSTEMS COMMAND HEADQUARTERS
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IN REPLY REFER TO

NAVAIRINST 3120.1C
PMA251
1 Nov 95

NAVAIR INSTRUCTION 3120.1C

From: Commander, Naval Air Systems Command

Subj: LEAD SYSTEMS COMMAND PROCEDURES AND RESPONSIBILITIES FOR
CERTIFICATION OF AVIATION FACILITIES AND EQUIPMENT IN
NAVAL SHIPS OPERATING AIRCRAFT

Ref: (a) OPNAVINST 3120.28B
(b) Joint Pub 3-04.1
(c) NAVAIRINST 13800.11C

Encl: (1) Aviation Facilities and Equipment Requiring
Certification

1. Purpose. To establish procedures and assign responsibilities for formal inspection and certification of aviation facilities and equipment in naval ships operating aircraft.

2. Cancellation. This instruction supersedes NAVAIRINST 3120.1B of 30 December 1987, and since this is a major revision, changes are not indicated.

3. Scope. This instruction applies to all U.S. Navy, U.S. Coast Guard (USCG), and Military Sealift Command* (MSC) ships whose missions include the conduct of flight operations and require installation of aviation facilities and equipment. Per reference (a), there are three distinct categories of afloat aviation facilities: Aviation Ships (CV/CVN), Amphibious Aviation Ships (AAS) (i.e., LPH/LHA/LHD), and Air Capable Ships (ACS). ACSs are defined as all ships other than CV/CVN and LPH/LHA/LHD which have an aircraft operating capability (i.e., landing, take-off, vertical replenishment, or helicopter in-flight refueling).

NOTE: For the purpose of this instruction, MSC area commanders are considered Type Commanders (TYCOMs). Commander, MSC is considered a Fleet Commander, and Commander, Coast Guard Atlantic and Pacific are considered TYCOMs.



4. Background. Reference (a) established the requirement for formalized ship certification which ensures the maintenance of proper standards for afloat aviation facilities and defines the basis of the certification program. Aviation facility and equipment certification are procedures which verify and document that the aviation facilities and equipment aboard ships are properly installed, operational, and adequate for the safe conduct of aircraft operations.

5. Responsibilities

a. Commander, Naval Air Systems Command (COMNAVAIRSYSCOM) has overall responsibility for the certification of aviation facilities and equipment aboard ships. The Naval Air Systems Command (NAVAIRSYSCOM) Aircraft Launch and Recovery Equipment Program Manager (PMA251) shall be responsible for:

(1) establishing certification policies, practices, and procedures;

(2) coordinating the development of certification requirements;

(3) integrating NAVAIRSYSCOM, Naval Sea Systems Command (NAVSEASYSKOM), Space and Naval Warfare Systems Command (SPAWARSYSKOM), Naval Aviation Program Executive Offices (PEOs), and Direct Reporting Program Managers (DRPMs) requirements into coordinated certification documents;

(4) reviewing aviation facility designs submitted by NAVSEASYSKOM, SPAWARSYSKOM, MSC, PEOs, DRPMs, and USCG for compliance with certification requirements;

(5) prescribing requirements for NAVAIRSYSCOM (including organizations supported by NAVAIRSYSCOM) cognizant aviation facility and equipment items for inclusion in certification documents (paragraph 5a(3) above);

(6) establishing safety requirements for all matters relating to NAVAIRSYSCOM (including organizations supported by NAVAIRSYSCOM) cognizant aviation facility and equipment items;

(7) granting, extending, or rescinding certification;

(8) budgeting for administrative and technical support for the total ship aviation facility and equipment certification programs;

(9) budgeting for engineering studies, hardware developments, and tests relating to NAVAIRSYSCOM (PMA251) cognizant items including the service evaluations of improved systems/equipment aboard ship;

(10) budgeting for the certification of NAVAIRSYSCOM cognizant systems aboard active fleet ships;

(11) providing to shipyard and repair facilities personnel technical training and orientation assistance on NAVAIRSYSCOM cognizant items;

(12) coordinating the development of NAVAIRSYSCOM cognizant certification related items with NAVSEASYSKOM and SPAWARSYSKOM to optimize ship compatibility; and

(13) designating a Shipboard Aviation Facilities Certification Manager (PMA251D) for the Aviation Facilities and Equipment Certification Programs. This individual will also be the single point of contact for ship/aircraft integration of joint operations delineated in reference (b) and will coordinate among NAVAIRSYSCOM competencies (AIR-4.3.1 for flight clearances and launch/recovery envelopes, AIR-4.1.7 for electromagnetic interference and hazards of electromagnetic radiation to ordnance restrictions) and NAVSEASYSKOM to ensure a safe, effective integration.

b. Commander, Naval Sea Systems Command (COMNAVSEASYSKOM) shall:

(1) prescribe requirements for inclusion in the certification documents (paragraph 5a(3) above) for NAVSEASYSKOM cognizant aviation facility and equipment items;

(2) provide design details to NAVAIRSYSCOM and Naval Air Warfare Center Aircraft Division, Lakehurst (NAWCAD Lakehurst) for any shipboard modifications that may affect aviation facility or equipment certification (paragraph 5a(4) above) in sufficient time to allow incorporation of recommendations or requirements into the installation;

(3) establish a budget to fund engineering studies, hardware developments, and tests relating to NAVSEASYSKOM cognizant items and the service evaluations of improved systems and equipment aboard ship;

(4) budget for the certification of ships involved in

construction and modernization programs;

(5) establish safety requirements for all matters relating to NAVSEASYS COM cognizant aviation facility items;

(6) provide coordinated reviews of certification related items submitted by NAVAIRSYSCOM (paragraph 5a(12) above); and

(7) designate a single point of contact for all matters relating to the certification program and shipboard aviation facility item integration.

c. Commander, Space and Naval Warfare Systems Command (COMSPAWARSYS COM) shall:

(1) prescribe requirements for SPAWARSYSCOM cognizant aviation facility and equipment items for inclusion in the certification documents (paragraph 5a(3) above);

(2) provide design details to NAVAIRSYSCOM and NAWCAD Lakehurst for any shipboard modifications that may affect aviation facility or equipment certification (paragraph 5a(4) above) in sufficient time to allow for incorporation of recommendations and requirements into the installation;

(3) establish a budget to fund engineering studies, hardware developments, and tests relating to SPAWARSYSCOM cognizant items including the service evaluations of improved systems and equipment aboard ship;

(4) budget for the certification of SPAWARSYSCOM cognizant systems aboard ships;

(5) establish safety requirements for all matters relating to SPAWARSYSCOM cognizant aviation facility items;

(6) provide coordinated review of certification related items submitted by NAVAIRSYSCOM (paragraph 5a(12) above); and

(7) provide a single point of contact for all matters relating to the certification programs and shipboard aviation facility integration.

d. NAWCAD Lakehurst administers the aviation facilities and equipment certification programs as tasked by NAVAIRSYSCOM and shall:

(1) issue instructions and procedures for conducting certification inspections;

(2) ~~conduct shipboard aviation facility~~ and equipment certification inspections;

(3) issue aviation facility and equipment certifications to appropriate TYCOMs, by direction of NAVAIRSYSCOM, with a copy to the ships and other commands as required;

(4) provide on-site fleet technical service to TYCOMs, other systems commands, and their field activities, contractors, ships, and shipyards regarding aviation facility and equipment installation and certification requirements;

(5) conduct training programs as required for shipyard and repair facility personnel;

(6) establish test programs and procedures for each aviation facility and equipment component listed in enclosure (1);

(7) provide test teams and inspection personnel per paragraph 5d(4) above, for technical assistance and support of new ship construction and overhaul programs. This technical assistance includes assist visits, pre-overhaul test and inspections, certification inspections, and Board of Inspection and Survey inspections;

(8) support the Naval Air Warfare Center Aircraft Division, Patuxent River (NAWCAD Patuxent River) with aviation facility design data, parameters, restrictions, etc., during the preparation of aviation facility, hardware and dynamic interface test plans; and

(9) work with NAWCAD Patuxent River on aviation facility developments and improvements derived from dynamic interface testing.

e. NAWCAD Patuxent River conducts flight tests to define the ship/aircraft dynamic interface envelope as tasked by NAVAIRSYSCOM. NAWCAD Patuxent River will provide test instrumentation, aircraft, test pilots, engineers, and aircraft maintenance support to:

(1) verify those aspects of the aviation facility that require actual aircraft operations;

(2) conduct tests used in establishing safe operating envelopes for the aircraft and ship combination, including verification of any general launch and recovery envelopes;

(3) conduct tests used in establishing fixed wing (including AV-8) CV/CVN and LPH/LHA/LHD launch and recovery certification requirements;

(4) work with NAWCAD Lakehurst on aviation facility developments and improvements derived from dynamic interface testing;

(5) assist NAWCAD Lakehurst during the development of aviation facility equipment, arrangements, and landing aids;

(6) generate written documentation for NAVAIRSYSCOM including recommendations relative to paragraphs 5e(1) through 5e(3) above; and

(7) provide current wind envelope data/charts to NAVAIRSYSCOM for inclusion in periodic revisions to Naval Warfare Publication 42 and LHA/LPH/LHD Naval Air Training and Operating Procedures Standardization manuals.

f. TYCOMs shall:

(1) schedule ship availability periods for aviation facility and equipment certification and for dynamic interface tests during periods that will ensure minimal interference and allow completion of testing; and

(2) authorize locally assigned NAWCAD Lakehurst fleet technical services representatives to supervise and monitor test programs.

g. Ship's commanding officer shall:

(1) furnish necessary personnel to operate equipment being tested or inspected; and

(2) provide ship's force assistance to the on-site technical representatives in conducting and witnessing certification and dynamic interface tests.

6. Certification Requirements. Aviation facilities and equipment (including systems, accessories, and hardware) that are required for the safe conduct of flight operations are to be certified. These facilities and equipment are listed in

enclosure (1).

Formal inspection and mandatory certification shall be required:

- a. after initial installation;
- b. after completion of any significant alteration or modification;
- c. prior to trials following overhaul or extended shipyard availability; and
- d. upon request of PEOs, DRPMs, NAVAIRSYSCOM, NAVSEASYSYSCOM, SPAWARSYSCOM, USCG, MSC, TYCOMs, or operational commanders.

7. Certification Procedures

a. Requests. Submit requests for certification directly to NAWCAD Lakehurst. The ship's TYCOM will be advised of all requests for equipment and facility certification. Individual ships desiring certification inspections should submit requests via their TYCOM to ensure optimum scheduling of the certification team. Precision Approach and Landing System certification requests will be submitted per reference (c).

(1) TYCOMs or Planning and Engineering for Repairs and Alterations (PERA) offices may request NAWCAD Lakehurst to conduct a pre-overhaul advisory inspection. These inspections are conducted in the same manner as a certification inspection. They are designed to assist in the preparation of work identification packages required prior to a ship undergoing an overhaul or availability. The results of the inspection are normally submitted only to the ship's commanding officer, TYCOM, NAWCAD Lakehurst, and the PERA representative.

(2) TYCOMs may request NAWCAD Lakehurst to conduct a pre-certification advisory (technical assist) inspection. The results of the inspection will be provided to the ship and TYCOM.

b. Inspection and Testing. The ship's aviation facilities and equipment will be inspected and tested by a team coordinated by a NAWCAD Lakehurst representative. Upon completion, the NAWCAD Lakehurst team coordinator will (via naval message to NAWCAD Lakehurst, TYCOMs, and other appropriate commands) either grant, rescind, or withhold certification. Full certification shall be predicated upon all aviation facility systems or equipment being properly installed, configured, operational, and

maintained as prescribed by applicable technical manuals or directives. The message will also specify the ship's current certification status, including deficiencies that preclude full certification for the operational capabilities specified by the Chief of Naval Operations (CNO).

c. Certification. The on-site NAWCAD Lakehurst representative is delegated responsibility to grant or rescind certification via naval message. NAWCAD Lakehurst will review all messages for accuracy and full compliance with requirements and amend, if warranted. The certification message will be addressed to TYCOMs and other appropriate commands. It will specify the ship's present aviation status, including any corrections that must be accomplished to achieve full certification for the operational capabilities specified by the CNO. Certifications granted will remain in effect until the next overhaul, not to exceed 2 years unless rescinded by NAVAIRSYSCOM or NAWCAD Lakehurst. Under extreme circumstances, upon TYCOM recommendation, certification may be extended to 3 years to meet urgent deployment or overhaul schedules.

d. Correction of Deficiencies. The certification of systems or equipment that experience a failure between overhauls or undergo alterations requiring outside assistance for restoration to operational status (i.e., to function within the tolerances and parameters for which they were designed) will be reinstated when the system or equipment is validated as operational by the ship's commanding officer, TYCOM, or a NAWCAD Lakehurst technical representative.

e. Waiver of Certification. When operational necessity requires that a non-certified ship operate with aircraft, the fleet commander-in-chief is authorized to issue a waiver per reference (a). If granted, the waiver enables a ship with known deficiencies to conduct air operations. The waiver will not exceed 1 year from the date of authorization and is issued by naval message containing the following:

- (1) specific levels, classes and types of aircraft;
- (2) specific operating procedures and limitations; and
- (3) specific mission, geographic locations, time, etc.

8. Review. PMA-251 shall review annually the contents herein and provide recommendations for changes and deletions to the Commander.

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J. A. LOCKARD

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AVIATION FACILITIES AND EQUIPMENT REQUIRING CERTIFICATION

	CV/CVN	LPH/LHA/LHD	ACS
Integrated Launch and Recovery Television Surveillance System	X		
Fresnel Lens	X		
Automatic Carrier Landing System	X	X	
Shipboard Marine Remote Area Approach and Landing System		X	
Manually Operated Visual Landing Aid System	X		
Catapults	X		
Nose Gear Launch System	X		
Arresting Gear/Barricade Systems	X		
Bridle Arrestors	X		
Jet Blast Deflectors	X		
Landing Signal Officer's Heads Up Display System	X		
JP-5 Fuel System	X	X	X
TACAN	X	X	X
Marking and Lighting/Visual Landing Aids	X	X	X
Wind Measuring Systems	X	X	X
Stabilized Glide Slope Indicator/ Wave Off Light System		X	X
Harrier Approach Path Indicator/Hover Position Indicator/Wave Off System VSTOL OLS/CAI MOD		X X X	
Aviation Operating and Support Facilities	X	X	X
Recovery Assist, Securing and Traversing System (LAMPS MK III)			X
Horizon Reference Set (LAMPS MK III)			X
Flight Deck Status and Signalling System (LAMPS MK III)			X
HOSS			X
Approach/Marshalling Radar	X	X	X

Enclosure (1)